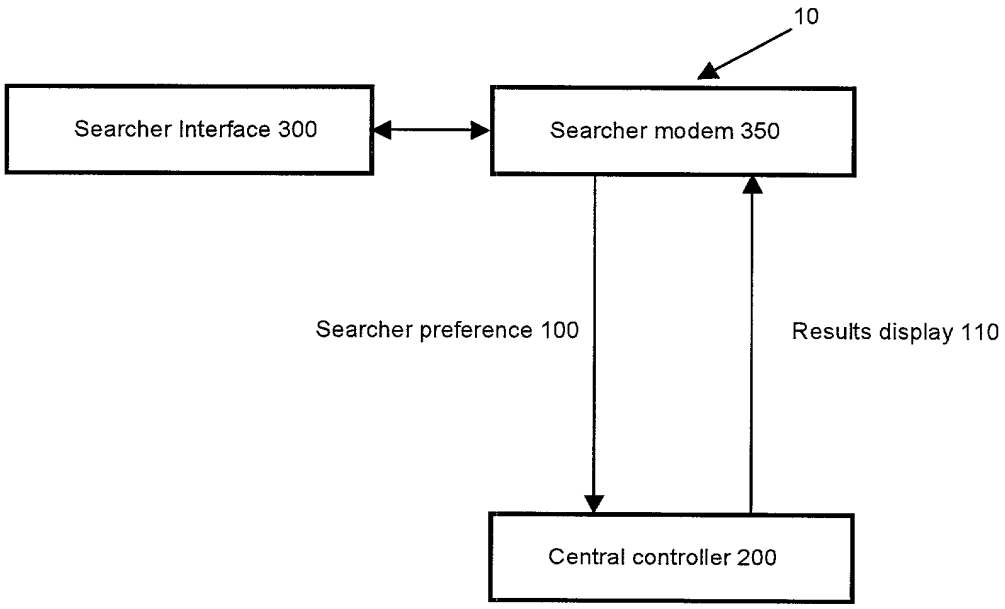

10
Searcher Interface 300
Searcher modem 350
Searcher preference 100
Results display 110
Central controller 200

Fig. 1

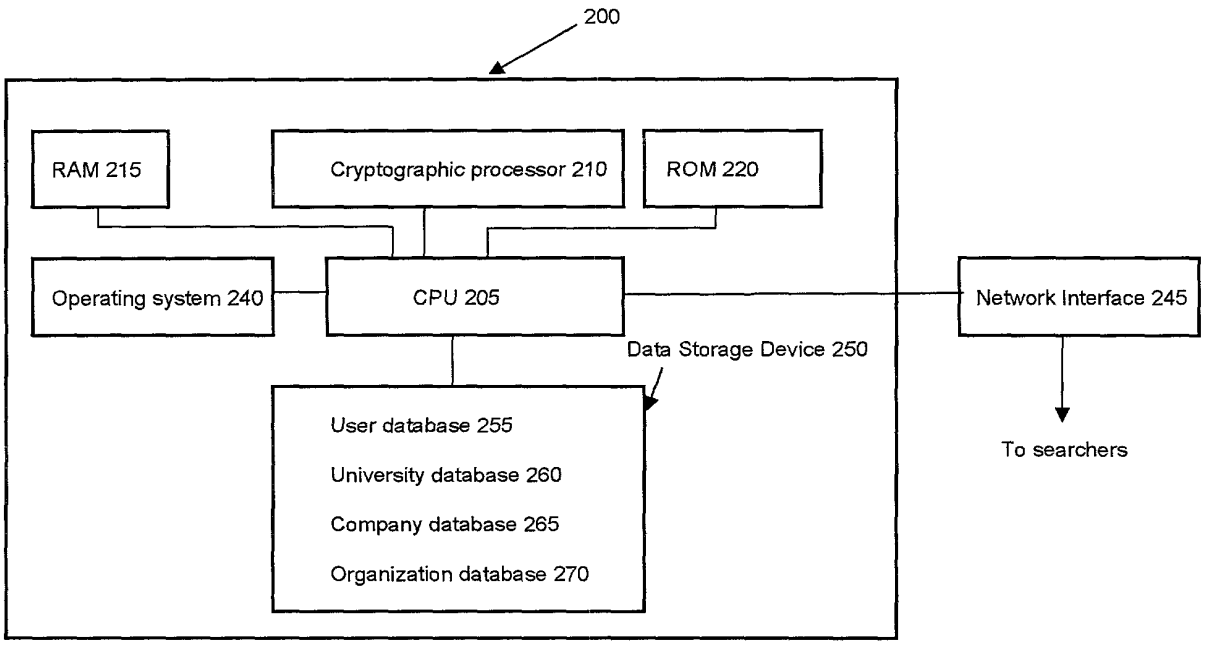

200
RAM 215
Cryptographic processor 210
ROM 220
Operating system 240
CPU 205
Network Interface 245
Data Storage Device 250
User database 255
University database 260
Company database 265
Organization database 270
To searchers

**Fig. 2**

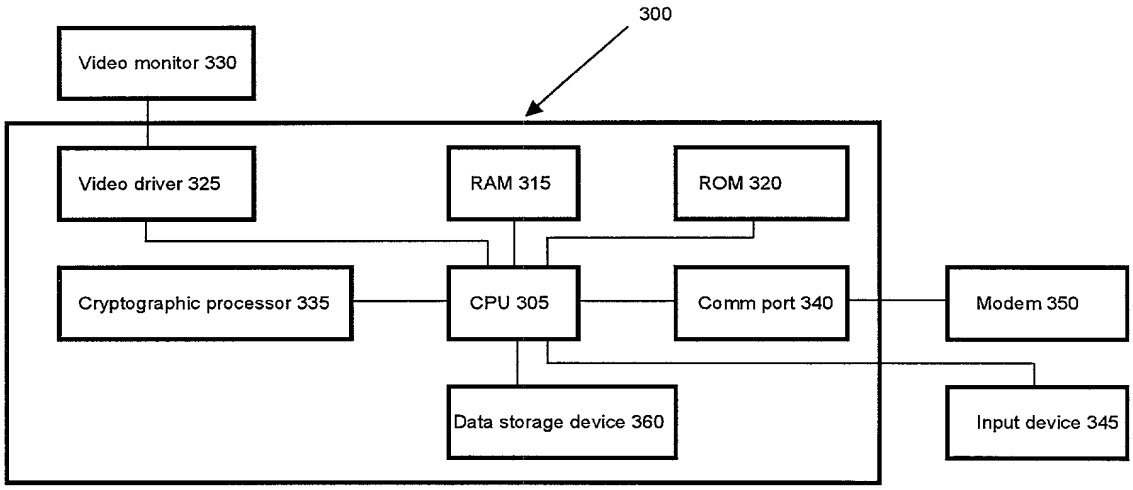

300
Video monitor 330
Video driver 325
RAM 315
ROM 320
Cryptographic processor 335
CPU 305
Comm port 340
Modem 350
Data storage device 360
Input device 345

Fig. 3

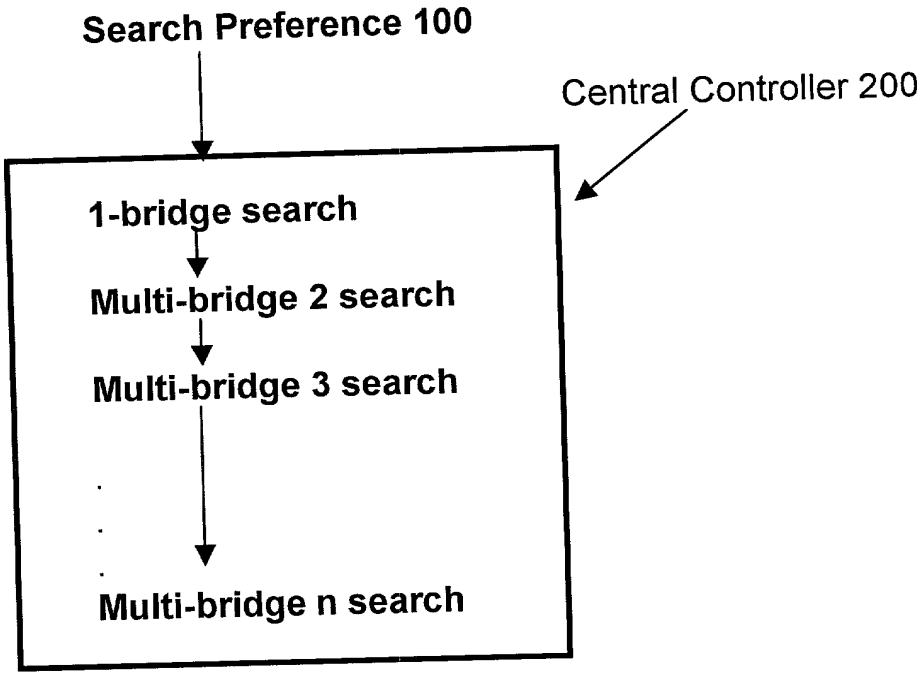

Search Preference 100
Central Controller 200
1-bridge search
Multi-bridge 2 search
Multi-bridge 3 search
Multi-bridge n search

Fig. 4a

TOP SECRET

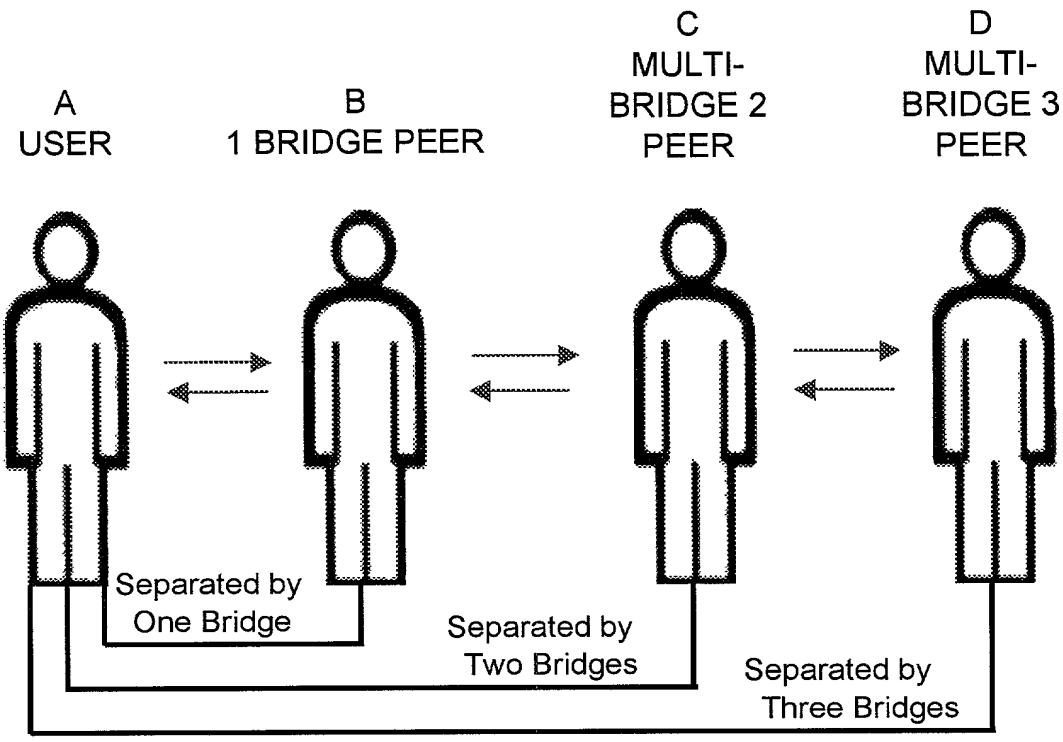



Fig. 4b

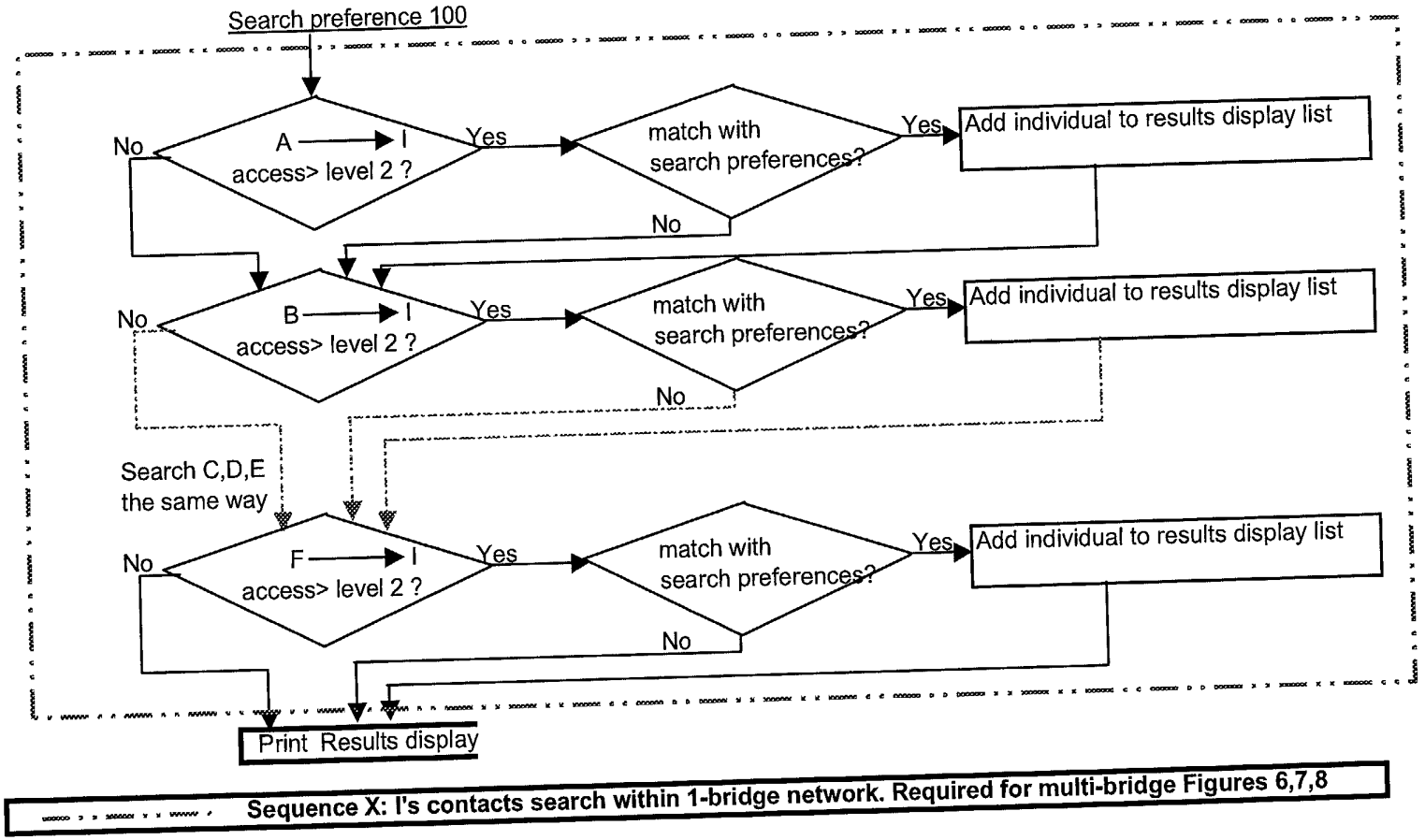

Search preference 100
A → I access> level 2 ?
No
Yes
match with search preferences?
Yes
Add individual to results display list
No
B → I access> level 2 ?
No
Yes
match with search preferences?
Yes
Add individual to results display list
No
Search C,D,E the same way
F → I access> level 2 ?
No
Yes
match with search preferences?
Yes
Add individual to results display list
No
Print Results display
Sequence X: I's contacts search within 1-bridge network. Required for multi-bridge Figures 6,7,8

Fig. 5a

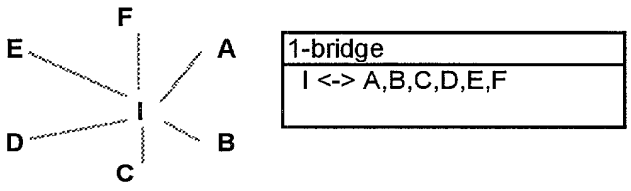



Fig. 5b

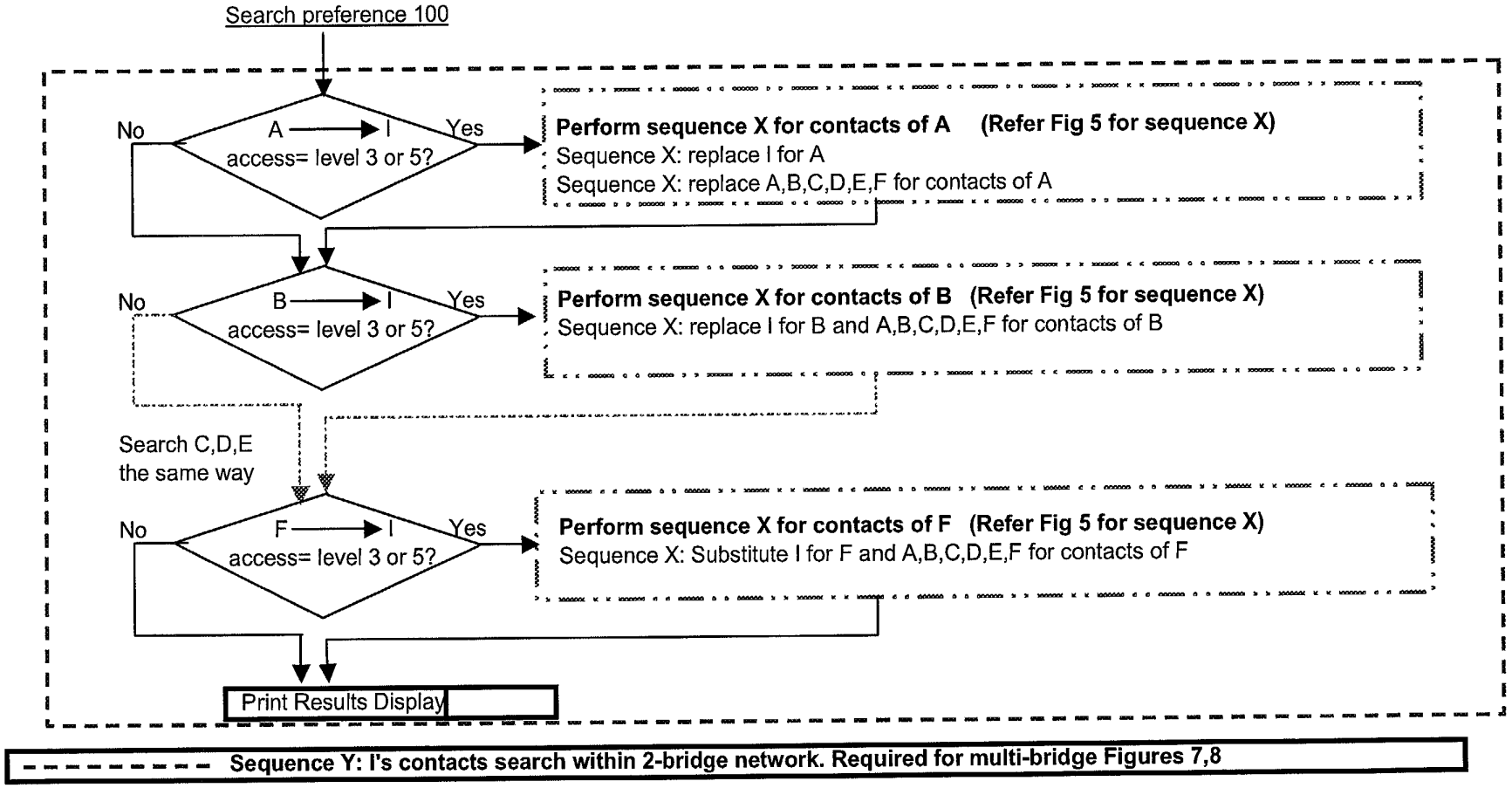
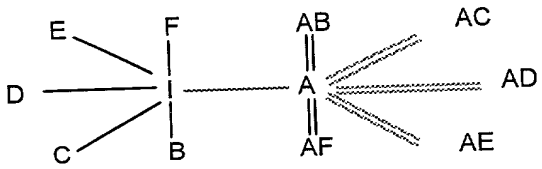

Search preference 100
No
A → I
access= level 3 or 5?
Yes
Perform sequence X for contacts of A (Refer Fig 5 for sequence X)
Sequence X: replace I for A
Sequence X: replace A,B,C,D,E,F for contacts of A
No
B → I
access= level 3 or 5?
Yes
Perform sequence X for contacts of B (Refer Fig 5 for sequence X)
Sequence X: replace I for B and A,B,C,D,E,F for contacts of B
Search C,D,E
the same way
No
F → I
access= level 3 or 5?
Yes
Perform sequence X for contacts of F (Refer Fig 5 for sequence X)
Sequence X: Substitute I for F and A,B,C,D,E,F for contacts of F
Print Results Display
Sequence Y: I's contacts search within 2-bridge network. Required for multi-bridge Figures 7,8

Fig. 6a




| | |
|---|---|
| 1-bridge | I <-> A,B,C,D,E,F |
| Multi-bridge 2 | I <-> AB,AC,AD,AE,AF |

**Fig. 6b**

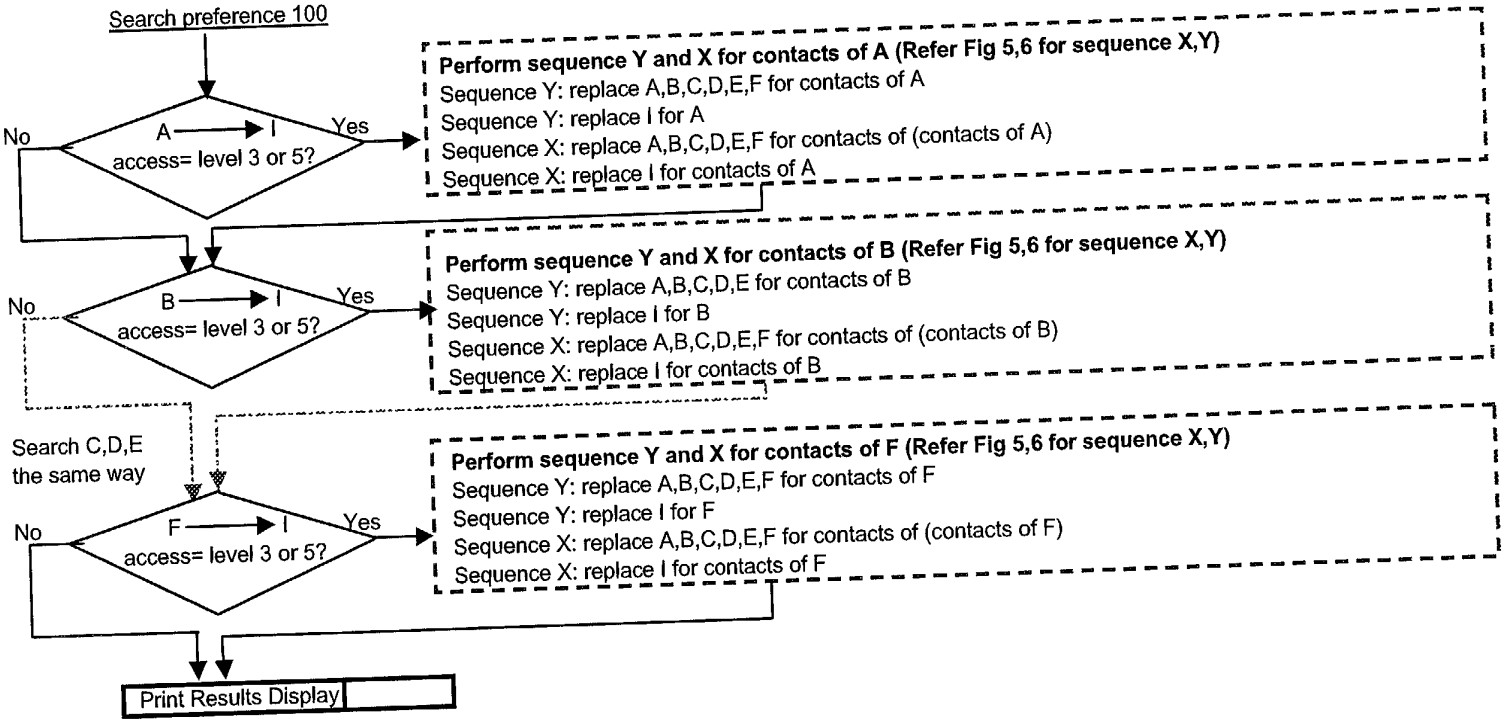
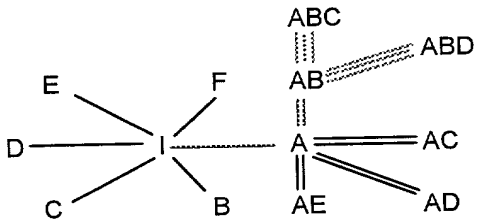
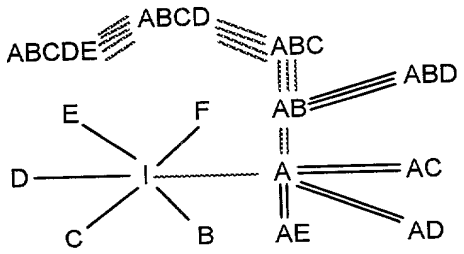

Search preference 100
A → I
access= level 3 or 5?
No
Yes
Perform sequence Y and X for contacts of A (Refer Fig 5,6 for sequence X,Y)
Sequence Y: replace A,B,C,D,E,F for contacts of A
Sequence Y: replace I for A
Sequence X: replace A,B,C,D,E,F for contacts of (contacts of A)
Sequence X: replace I for contacts of A
B → I
access= level 3 or 5?
No
Yes
Perform sequence Y and X for contacts of B (Refer Fig 5,6 for sequence X,Y)
Sequence Y: replace A,B,C,D,E for contacts of B
Sequence Y: replace I for B
Sequence X: replace A,B,C,D,E,F for contacts of (contacts of B)
Sequence X: replace I for contacts of B
Search C,D,E
the same way
F → I
access= level 3 or 5?
No
Yes
Perform sequence Y and X for contacts of F (Refer Fig 5,6 for sequence X,Y)
Sequence Y: replace A,B,C,D,E,F for contacts of F
Sequence Y: replace I for F
Sequence X: replace A,B,C,D,E,F for contacts of (contacts of F)
Sequence X: replace I for contacts of F
Print Results Display

Fig. 7a



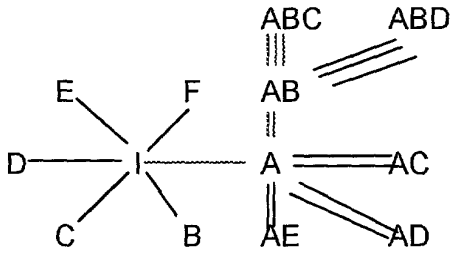

| | |
|---|---|
| 1-bridge | I <-> A,B,C,D,E,F |
| Multi-bridge 2 | I <-> AB,AC,AD,AE |
| Multi-bridge 3 | I <-> ABC,ABD |

**Fig. 7b**




| | |
|---|---|
| 1-bridge | I <-> A,B,C,D,E,F |
| multi-bridge 2 | I <-> AB,AC,AD,AE |
| multi-bridge 3 | I <-> ABC, ABD |
| multi-bridge 4 | I <-> ABCD |
| multi-bridge 5 | I <-> ABCDE |

**Fig. 8**




**Display to I**

1 match found within 3 bridges (in this example)

| Industry | City | Name | Alphanumeric code |
|---|---|---|---|
| E-commerce | London | A | |
| | | ? | abc2 |
| | | ? | abc3 |

**Fig. 9**